



mo-o-ve toward building
a better **environment** . . .
with a

GREEN ROOF

*A Green Roof is a rooftop covered by
a protective, insulating layer of soils and living plants.*

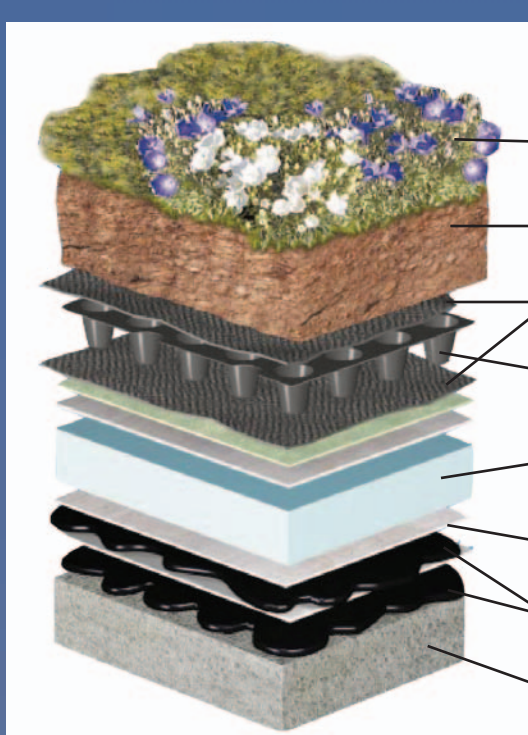
DIFFERENT LEVEL OF SYSTEMS:

INTENSIVE – Most complex roofing systems; used for a park-like landscape.

EXTENSIVE – Lightweight, low maintenance economical system; for flat or sloped roofs weighing between 8 and 50 lbs /sf.

MODULAR – Even simpler system; consisting of planters placed directly on an existing roof.

TYPICAL ROOF SYSTEM



Plants

Growth Medium

Filter Fabric

Drainage Material

Insulation

Root barrier

Membrane

Deck

WHY USE ONE?

No other single building system can claim to address aspects of all of the following Federally-mandated Executive Orders:

- EO 13148 *Greening the Government Through Leadership in Environmental Management*
- EO 13134 *Developing and Promoting Biobased Products and Bioenergy*
- EO 13123 *Greening the Government Through Efficient Energy Management*
- EO 13101 *Greening the Government Through Waste Prevention Recycling and Federal Acquisition*
- EO 11990 *Protection of Wetlands*
- EO 11988 *Floodplain Management*

BENEFITS

- Protects the roof membrane from UV radiation, high temperature flux, and debris from storm damage
- A roof life expectancy 2-3 times longer than a conventional roof
- Long life conserves building materials reducing landfill and replacement costs.
- Reduces cooling costs by 50-70%
- Decreases need for stormwater retention infrastructure and maintenance of infrastructure, such as underground sand filter, holding tanks, and ponds.
- Can lower sewerage and sewer hook up fees
- Can recapture useable recreational space and provides additional aesthetic value
- Increases property value by an estimated 6-15%
- Reduces stormwater run-off and sewer overflow
- Reduces Urban heat Island Effect
- Reduces air pollution



INCENTIVES

Government agencies must look for creative ways to deal with the first costs of sustainable design. For example, in cases of leased buildings or leaseback, or public-private partnership there are numerous government grants and tax incentives available.

- LEED benefits: a green roof is worth 1 credit, and through creative design can contribute to a number of additional points
- Some areas have implemented a Local Rain Tax that equals \$X/sf impervious surface
- Baltimore has impervious surfaces fees for new development
- Portland, Oregon provides a FAR bonus option to green roof projects
- Some jurisdictions are incorporating Green Roofs into their Stormwater Management Programs.
- Some local water authorities may like to make a deal

... green roofs for
a greener environment ...

EXAMPLES

Baltimore – Montgomery Park • <http://facit.gsa.gov/Applications/PhotoTour.nsf>

Chicago – CITY HALL 9/20/00
– Chicago Dept. of Environment • www.ci.chi.il.us/environment

Cleveland – Cleveland Green Building Coalition • www.clevelandgbc.org

Detroit – FORD Rouge (450,000 sf.) •
<http://www.mcdonoughpartners.com/projects/fordrouge>

New York – Earthpledge •
<http://www.earthpledge.org/GreenRoof.html>

Philadelphia – Fencing Academy of Phila. •
<http://www.epa.gov/owow/nps/roofcover.pdf>

Washington, DC – Youth Conservation Corps
– Yorktown Square Condos
(Falls Church Virginia)



FOR MORE INFO ABOUT GREEN ROOFS

Whole Building Design Guide

<http://www.wbdg.org/design/resource.php?cn=0&cx=1&rp=41>

Greenroof

<http://www.greenroofs.com/>

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202.544.8453 • Email: katrin@scholz-barth.com

Green Roofs for Healthy Cities

416-422-1977 • <http://www.peck.ca/>

GreeningGotham.org

<http://www.greeninggotham.org/intro.php>



GREEN ROOF SYSTEM MANUFACTURERS

American Hydrotech

Mathew Carr

804-378-6125

<http://www.greenroofs.com>

Barrett Roofs

Dave Honza

301-953-7210

<http://www.barrettroofs.com/>

Garland Roofing Company

Aaron Hundley

410-404—7717

<http://www.garlandco.com/>

Roofscapes

Charlie Miller

215-247-8784

www.roofmeadow.com

Sarnafil

Craig Boucher

781-828-5400

www.Sarnafil.com

Soprema

Robert Youder

301-695-7770

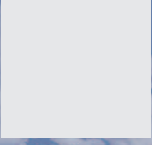
yodernet@att.net

<http://www.soprema.com/>

Envirotec Roof Systems

754-431-3170

www.buildinglogics.com



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